

**Notice of Allowability**

Application No.

10/718,734

Examiner

Matthew L. Fedowitz

Applicant(s)

WOO ET AL.

Art Unit

1623

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8/4/2005.
2. ☒ The allowed claim(s) is/are 3,9 and 12.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|   | 9. <input type="checkbox"/> Other _____   |



### **DETAILED ACTION**

During an interview with Eugene Lieberstein on September 8, 2005 and September 12, 2005 an agreement was reached where claims 3, 9 and 12 were to be amended and is discussed below.

The arguments filed August 4, 2005 have been received, entered and carefully considered.

- A. Claims 1-2, 4-8, 10-11 and 13-48 have been cancelled.
- B. Claims 3, 9 and 12 have been amended.
- B. Comments regarding the Office Action have been provided drawn to:
  - 1. Applicant's amendments regarding the claim rejections under 35 U.S.C. §112 First and Second Paragraphs have been considered and are persuasive.
- E. Claims 3, 9, and 12 are allowable.

#### ***Claim Rejections - 35 USC §112 First and Second Paragraphs***

Applicant's amendments regarding the claim rejections under 35 U.S.C. §112 First and Second Paragraphs have been considered and are persuasive in regard to claims 3, 9, and 12.

#### ***Allowable Subject Matter***

Claims 3, 9, and 12 are allowable and are directed to allowable porphyrin compounds and the pharmaceutically compositions thereof useful as an anticancer or photodynamic diagnostic agent by way of reproducing singlet state oxygen radical.

The applicant's amendments presented in the reply dated August 4, 2005 are found to be persuasive in regard to claims 3, 9 and 12. Claims 3, 9 and 12 are found to be allowable because the claimed subject matter is not taught nor fairly suggested in the prior art. The applicant's claim requirement wherein R<sub>2</sub> must be a polyethylene glycol group distinguishes the applicant's claims from the prior art.

The closest prior art is found in Hynninen et al., Holt, and Wasielec et al. wherein porphyrin core compounds are disclosed. The divergent factor between the prior art disclosures and the applicant's claims are that the prior art disclosures do not teach compounds wherein R<sub>1</sub> and R<sub>2</sub> are substituted in the manner as claimed by the applicant.

#### ***Examiner's Amendment***

An examiner's amendment to the record appears below. Should the charges and/or additions be unacceptable to the applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The Application has been amended as follows:

1. In claim 3, the phrase "R<sub>1</sub> is a straight or branched lower alkyl or alkoxy group having 1-to 6 carbon atoms, a polyethylene glycol group selected from the groups consisting of an ethyl group, a propyl group, an ethyleneglycol group, diethyleneglycol group, triethyleneglycol group, tetraethyleneglycol group, heaethyleneglycol group, heptaethyleneglycol group or a methoxyethyleneglycol group; and R<sub>2</sub> is a polyethyleneglycol group selected from the group

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consisting of an ethyl group, a propyl group, an ethyleneglycol group, diethyleneglycol group, triethyleneglycol group, tertaethyleneglycol group, hexaethyleneglycol group, heptaethyleneglycol group or a methoxyethyleneglycol group” has been changed. The claim should read as follows: “--R<sub>1</sub> is a straight or branched lower alkyl or alkoxy group having 1-6 carbon atoms, an ethylene glycol group of formula -(OCH<sub>2</sub>CH<sub>2</sub>O)<sub>n</sub>- where n=4, 6 or 7, an ethylene glycol group, a diethylene glycol groups, a triethylene glycol group or a methoxyethylene glycol group; and R<sub>2</sub> is an ethylene glycol group of formula -(OCH<sub>2</sub>CH<sub>2</sub>O)<sub>n</sub>- where n=4, 6 or 7, an ethylene glycol group, a diethylene glycol groups, a triethylene glycol group or a methoxyethylene glycol group, which can chelate with transition metal ions comprising Ni metal ion--.”

2. In claim 9, the phrase “together with a pharmaceutically acceptable carrier to treat or prevent breast cancer” has been changed. The claim should read as follows: “together with a pharmaceutically acceptable carrier to treat breast cancer--.”

3. In claim 12, the phrase “a method of treating or preventing breast cancer in a human” has been changed. The claim should read as follows: “--a method of treating breast cancer in a human--.”

### ***Conclusion***

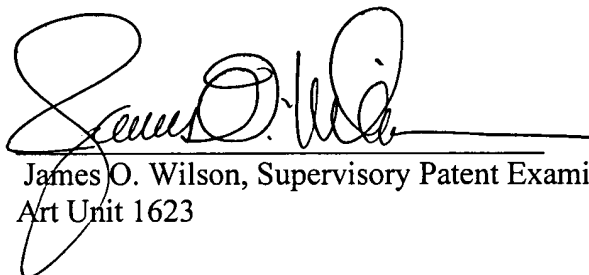
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew L. Fedowitz whose telephone number is (571) 272-3105. If attempts to reach the examiner by telephone are unsuccessful, the examiner's primary, James O. Wilson, can be reached on (571) 272-0661. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.

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Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)

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Matthew L. Fedowitz, Pharm.D., Esq.



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James O. Wilson, Supervisory Patent Examiner  
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